P-11

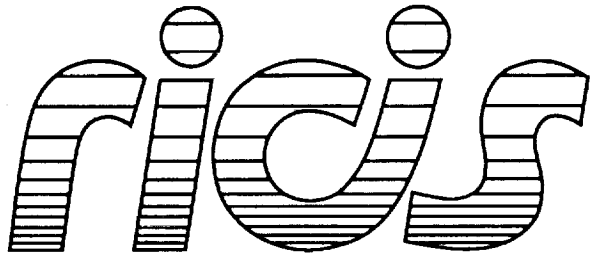
NASA Project Icon Image Access and Management Year Two Status Report

12/20/88

Project Icon Image Scaling Laboratory
The University of Texas at Austin

Cooperative Agreement NCC 9-16
Research Activity No. IM.10

NASA Johnson Space Center
Center Operations Directorate
Photography and Television Technology Division



Research Institute for Computing and Information Systems
University of Houston-Clear Lake

INTERIM REPORT

The RICIS Concept

The University of Houston-Clear Lake established the Research Institute for Computing and Information Systems (RICIS) in 1986 to encourage the NASA Johnson Space Center (JSC) and local industry to actively support research in the computing and information sciences. As part of this endeavor, UHCL proposed a partnership with JSC to jointly define and manage an integrated program of research in advanced data processing technology needed for JSC's main missions, including administrative, engineering and science responsibilities. JSC agreed and entered into a continuing cooperative agreement with UHCL beginning in May 1986, to jointly plan and execute such research through RICIS. Additionally, under Cooperative Agreement NCC 9-16, computing and educational facilities are shared by the two institutions to conduct the research.

The UHCL/RICIS mission is to conduct, coordinate, and disseminate research and professional level education in computing and information systems to serve the needs of the government, industry, community and academia. RICIS combines resources of UHCL and its gateway affiliates to research and develop materials, prototypes and publications on topics of mutual interest to its sponsors and researchers. Within UHCL, the mission is being implemented through interdisciplinary involvement of faculty and students from each of the four schools: Business and Public Administration, Education, Human Sciences and Humanities, and Natural and Applied Sciences. RICIS also collaborates with industry in a companion program. This program is focused on serving the research and advanced development needs of industry.

Moreover, UHCL established relationships with other universities and research organizations, having common research interests, to provide additional sources of expertise to conduct needed research. For example, UHCL has entered into a special partnership with Texas A&M University to help oversee RICIS research and education programs, while other research organizations are involved via the "gateway" concept.

A major role of RICIS then is to find the best match of sponsors, researchers and research objectives to advance knowledge in the computing and information sciences. RICIS, working jointly with its sponsors, advises on research needs, recommends principals for conducting the research, provides technical and administrative support to coordinate the research and integrates technical results into the goals of UHCL, NASA/JSC and industry.

Preface

This research was conducted under auspices of the Research Institute for Computing and Information Systems by Dr. Mark E. Rorvig of the Project Icon Scaling Laboratory, Graduate School of Library and Information Science at the University of Texas at Austin. Dr. Peter C. Bishop, Director of the Space Business Research Center, University of Houston-Clear Lake served as RICIS research coordinator.

Funding has been provided by the Center Operations Directorate, NASA/JSC through Cooperative Agreement NCC 9-16 between the NASA Johnson Space Center and the University of Houston-Clear Lake. The original NASA technical monitor for this research activity was Paul R. Penrod, Assistant to the Director, Center Directorate. Upon his retirement, David G. Billingsley, Chief, Photography and Television Technology Division, Center Operations Directorate, NASA/JSC became the technical monitor.

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PROJECT STATUS REPORT

20 December 1988

AGENDA

- o Review of Search/Description Station Features
  - o Underlying Database
  - o Personal Librarian Alterations
  - o New Screen Characteristics

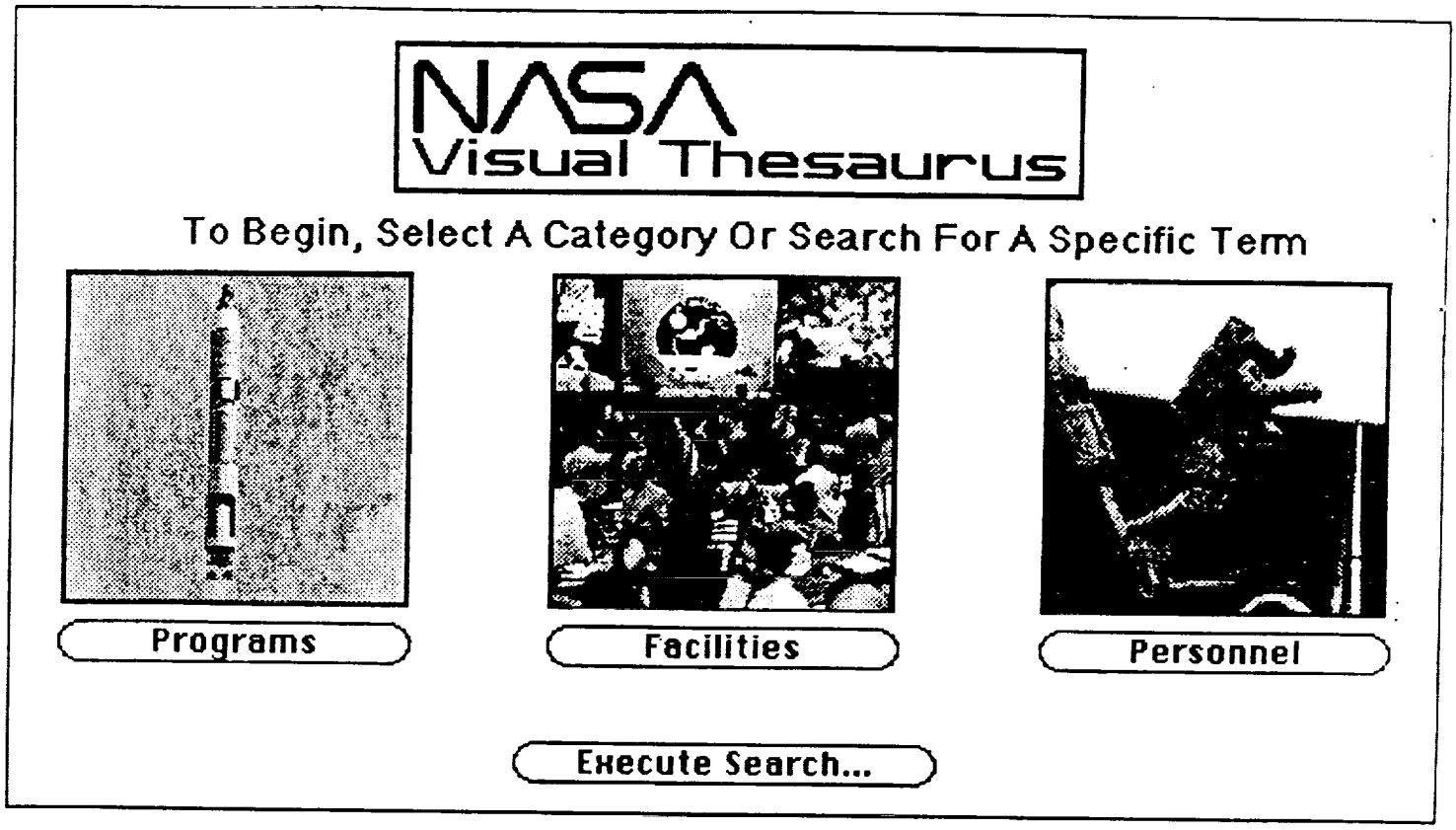
- o Review of Vocabulary Control Procedures
  - o Use of NASA Thesaurus of Technical Descriptors
  - o Review of Image/Vocabulary Matching Process Development

- o Implementation Schedule
  - o January 15 First Production Version
  - o Beta Test Request Changes
  - o March 15 Final System Implementation
  - o Incorporation of Film Vocabulary
  - o Incorporation of Additional Photography
  - o March 15 Begin Film Indexing/Search Development

- o Development of the NASA Input/Output Visual Control System
  - o Overview of the System
  - o Benefits of the System
  - o Cost and Engineering Specifications Completion Target May 1
  - o Prototype System Target June 15

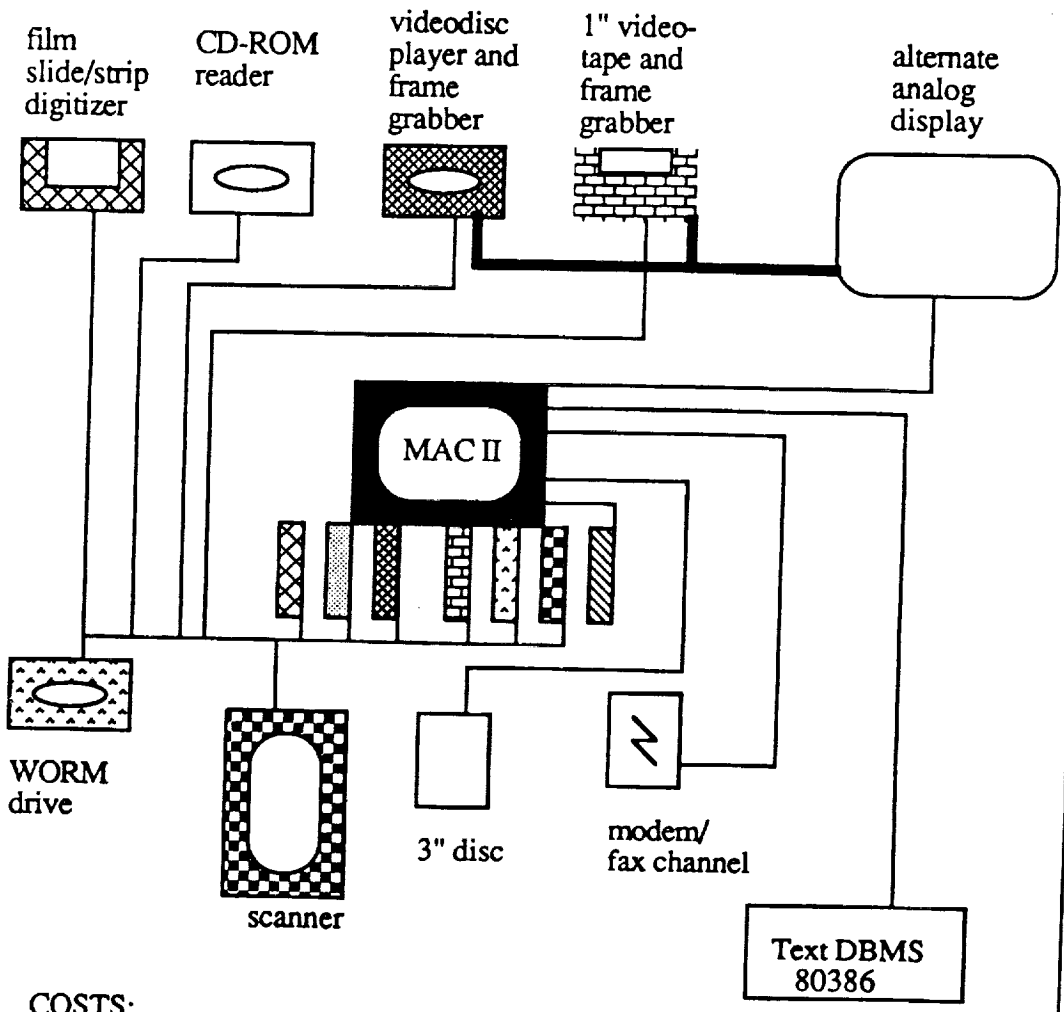
- o Summary

Opening Screen:



The screen that allows the user to start searching the thesaurus.

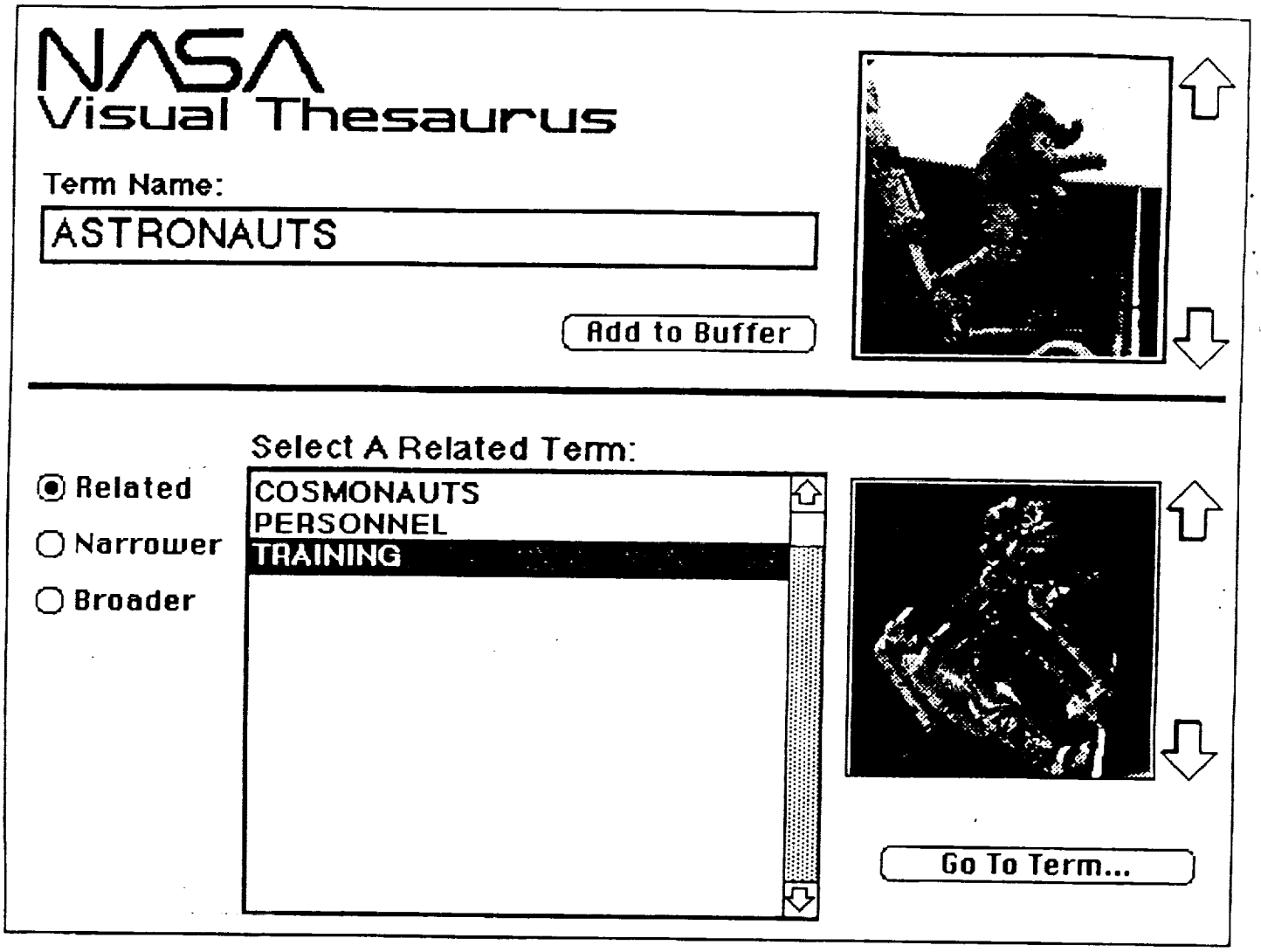
NASA IMAGE INPUT / OUTPUT WORKSTATION



COSTS:
1. Film slide/strip digitizer
2. CD-ROM player
3. Videodisc player and frame grabber
4. 1" videotape and frame grabber
5. Alternate analog display
6. Worm drive
7. Scanner
8. MAC II

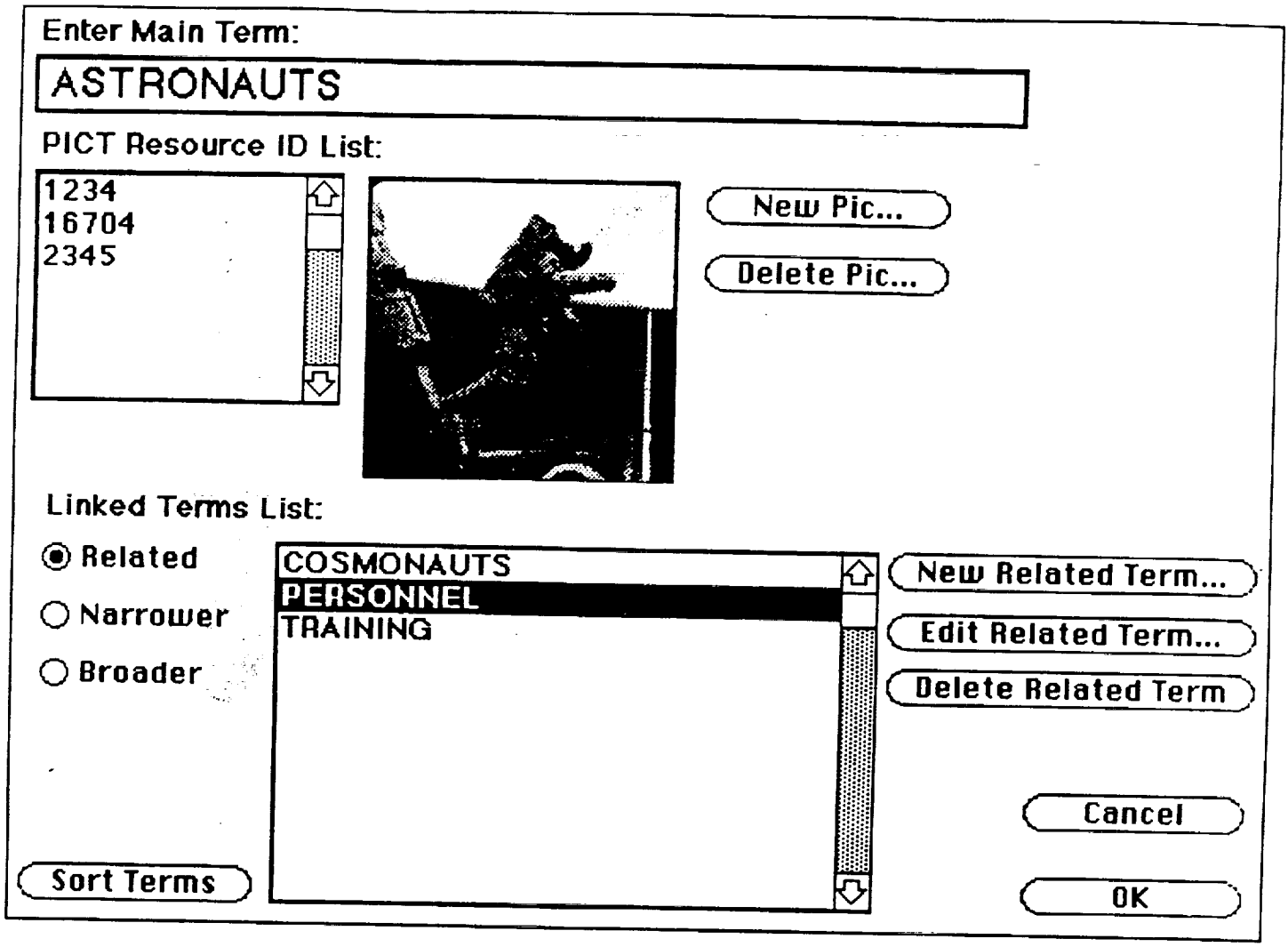
Project ICON Image Scaling Laboratory

Main Term Screen:



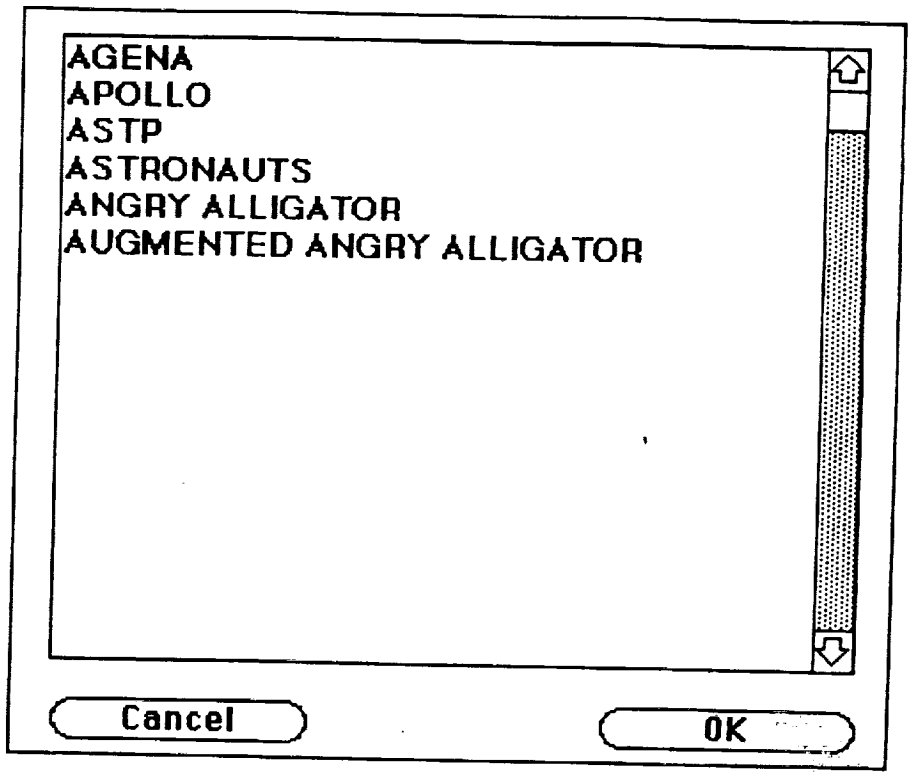
Allows the user to view the term and associated pictures, enter the term into the search buffer, and go to one of the linked terms.

Main Input Screen:



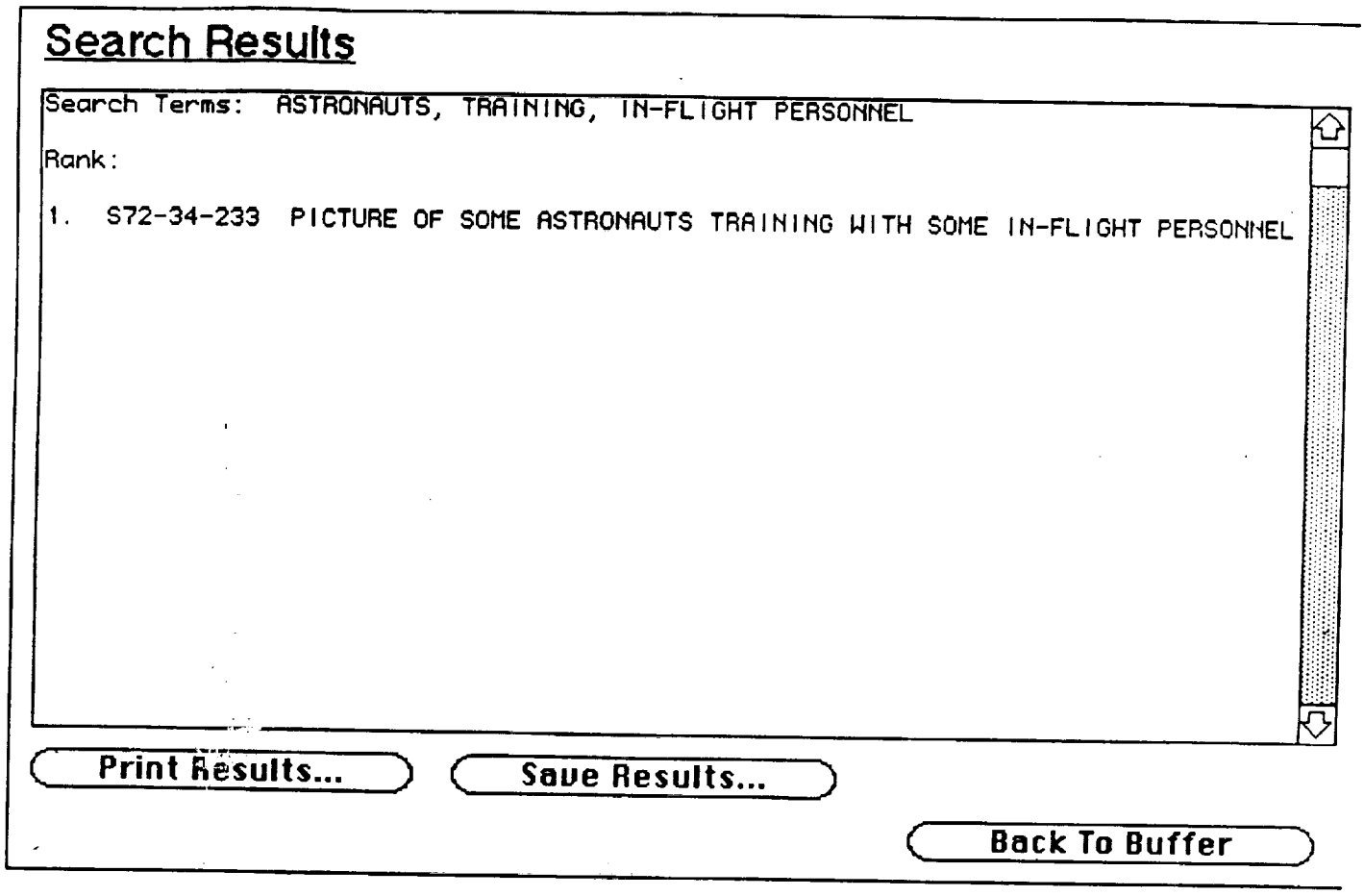
Allows the user to enter new terms, edit terms, and add pictures and links between terms.

Term Index:



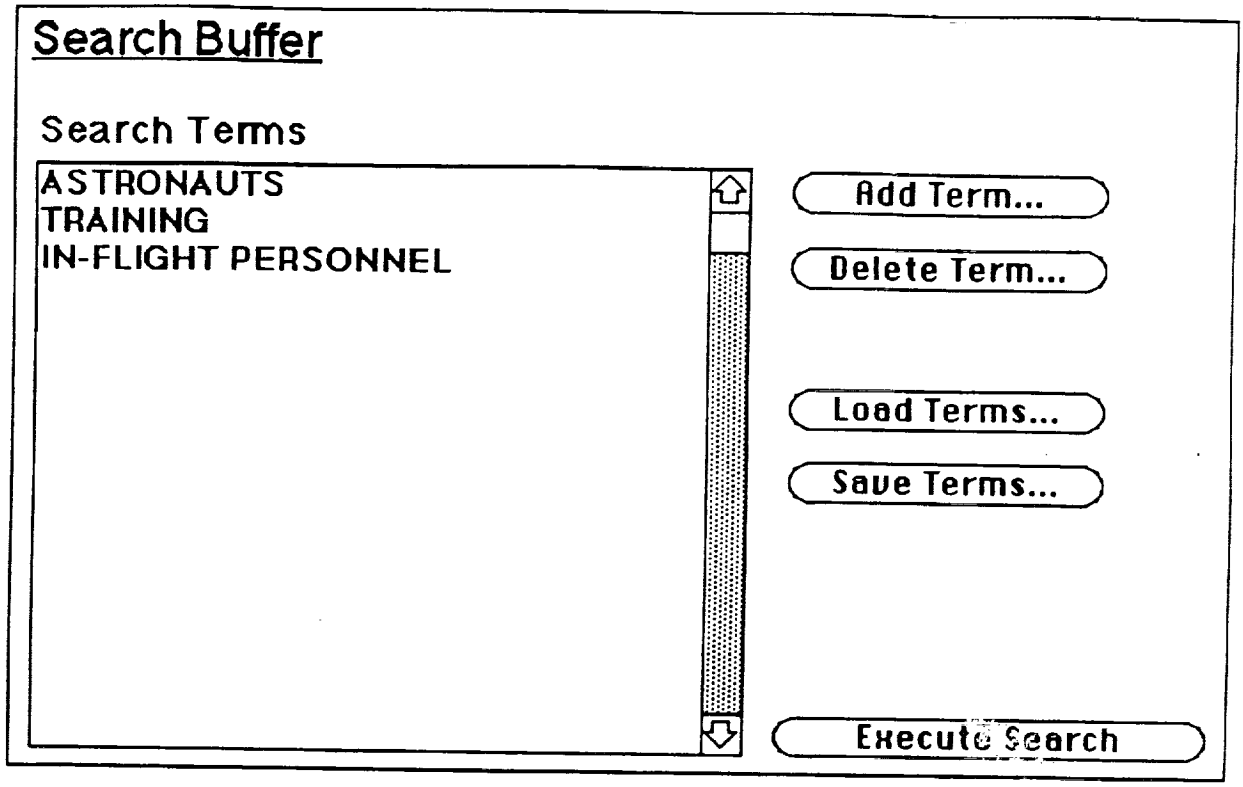
Allows the user to select a term by scrolling through an alphabetic list of all the terms in the thesaurus.

Results Screen:



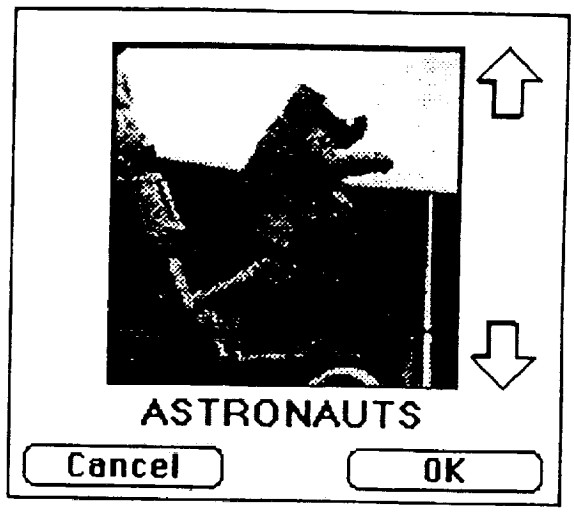
Shows the results of the search on the external database.

Search Buffer:



Displays a list of all the search terms collected while browsing through the thesaurus, allows addition and deletion of search terms, allows loading and saving of sets of terms, and executes searches on the external database.

Picture Index:



Allows the user to select a term by scrolling through the list of pictures stored in the visual thesaurus. There may be more than one picture for each term in the thesaurus to aid in picture searching.